



## Lightning

### General Information

Lightning is one of the most capricious and unpredictable characteristics of a thunderstorm. Because of this, no one can guarantee an individual or group absolute protection from lightning. However, knowing and following proven lightning safety guidelines can greatly reduce the risk of injury or death.

### Preventative Measures

Crew members should be aware of local weather patterns, avoid open areas during lightning storms, and leave the job site when prudent. The safest location during a thunderstorm is inside a large enclosed structure with plumbing and electrical wiring. If no buildings are available, then an enclosed metal vehicle such as an automobile, van, or school bus makes a decent alternative. *Not all types of buildings or vehicles are safe during thunderstorms.* Buildings that have exposed openings are NOT SAFE, even if they are “grounded.” These include metal sheds, picnic shelters/pavilions, and porches.

Use the Flash to Bang method to estimate the distance of lightning from your location. When you see a flash of lightning, count the number of seconds until you hear the thunder. Divide the number of seconds by five to get the distance the lightning is away from you. For example, if you see lightning and then hear the thunder 10 seconds later, then the lightning is 2 miles away from you. The 30/30 Rule states that people should seek shelter if the Flash-To-Bang delay (length of time in seconds between a lightning flash and its subsequent thunder) is 30 seconds or less. The second 30 corresponds to remaining under cover for 30 minutes after the final clap of thunder.

Studies have shown most people struck by lightning are struck before and after the storm has peaked, not at the apex of a storm, illustrating that many people are unaware of how far lightning can strike from its parent thunderstorm. DO NOT wait for the rain to start before seeking shelter, and do not leave shelter just because the rain has ended.



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### If You are Caught in a Lightning Storm

There may be times when getting to a building or vehicle is simply not possible. Should that happen, recognize that while no place is completely safe from lightning, some places are much safer than others.

#### Places To Avoid Include:

- water—avoid streams or other water bodies
- high ground
- open spaces
- metal objects such as electrical wires, towers, and fences
- hill tops and elevated objects
- being the highest object in the area or being near the highest object in the area
- isolated high trees

#### Places To Seek Include:

- dry caves, ditches, or hide beneath a head-high clump of trees in an open area in the forest.
- crouch in a sitting position, preferably on a mat or sleeping pad.

### If Someone is Struck by Lightning

You are likely experiencing an electrical charge if your hair stands on end or your skin tingles. If this happens, lightning may be about to hit you so drop to the ground at once.

- Victims struck by lightning receive a severe electrical shock and maybe burns, but they carry no electrical charge and can be moved safely.
- A person struck by lightning can often be revived by prompt administration of CPR and oxygen. Rescue breaths may need to be administered for an extended time.